

A. Cover Sheet (Attach to front of proposal.)

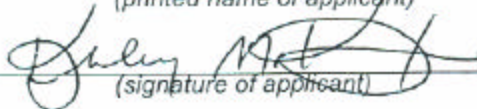
1. Specify: ☒ agricultural project or ☐ individual application or
☒ urban project ☐ joint application
2. Proposal title—concise but descriptive: Rainharvesting in Economically-Depressed Neighborhood
3. Principal applicant—organization or affiliation: San Francisco Public Utilities Commission
4. Contact—name, title: Kimberley M. Knox, Conservation Administrator
5. Mailing address: 1155 Market, 4th Floor, San Francisco, CA 94103
6. Telephone: (415) 554-2425
7. Fax: (415) 554-0796
8. E-mail: kknox@puc.sf.ca.us
9. Funds requested—dollar amount: \$ _____
10. Applicant cost share funds pledged—dollar amount: \$ _____
11. Duration—(month/year to month/year): 7/1/01 to 6/1/02
12. State Assembly and Senate districts and Congressional district(s) where the project is to be conducted:
13th Assembly District; State Senate District 3; Congressional District #8
13. Location and geographic boundaries of the project: Bayview/Hunters' Point neighborhood of San Francisco, CA-south of Bayshore from 3rd Avenue to Silver, to the San Francisco/San Mateo County line.
14. Name and signature of official representing applicant. By signing below, the applicant declares the following:
- the truthfulness of all representations in the proposal;
 - the individual signing the form is authorized to submit the application on behalf of the applicant;
 - the applicant will comply with contract terms and conditions identified in Section 11 of this PSP.

Kimberley M. Knox

(printed name of applicant)

2/12/01

(date)



(signature of applicant)

B. Scope of Work

This project will use rain harvesting to reduce flooding in the Bayview/Hunters' Point neighborhood of San Francisco; reduce the risk of untreated sewage flowing into the San Francisco Bay, and increase water efficiency by using the harvested rain for landscape irrigation.

One hundred rainharvesting containers will be placed in ten city-owned locations throughout the Bayview/Hunters' Point neighborhood. (See Table A) Bayview Hunters' Point is a neighborhood on the southeast side of San Francisco. It is traditionally considered a working-class, African-American community. In recent years, the neighborhood has also become home to large population of Latinos and Asian Americans. According to Southeast Alliance for Environmental Justice, the unemployment rates in Bayview Hunters' Point are twice as high as the rest of San Francisco. The neighborhood was originally founded to support the Hunters' Point Naval Yard, which closed in 1971. Inside its boundaries lies two Superfund sites, several industrial facilities and two power plants.

San Francisco's largest wastewater treatment plant, Southeast is placed at the middle of this neighborhood. Southeast processes 80% of San Francisco's wastewater or approximately 64 million gallons per day. Since a large portion of the Bayview Hunters' Point lies at sea level, the City's combined stormwater/sewer system overflows and floods homes and businesses on extremely wet weather flows. Last year, Southeast Wastewater Treatment Plant experienced combined storm/sewer overflows twelve days last year. Since San Francisco has a combined storm/wastewater facility, approximately 14% of the flow processed by Southeast Wastewater Treatment Plant is stormwater (4 billion gallons out of 28 billion gallons).

This project would work with four trained high school students from the Bayview/Hunters' Point Neighborhood to place one hundred rainharvest containers at ten city-owned locations in the neighborhood. The students will be trained and supervised by the San Francisco League of Urban Gardeners, a nonprofit organization internationally known for its community outreach programs. SLUG oversees and coordinates 100 community gardens in schools, housing projects and neighborhoods throughout the City. It also provides training opportunities in composting and green gardening to the public in diverse communities and has also created an Environmental Justice Program to create a forum for community organizing and research pertaining to environmental justice issues.

The water collected by the rain barrels will be monitored by the SLUG crew on a daily basis. The crew will monitor the number of gallons of water collected during wet weather incidents. They will also monitor on a weekly basis, the harvested water's chemical parameters of pH, dissolved oxygen, nitrates, phosphates, temperature and turbidity. A state-certified laboratory will also test the water collected by each barrel during the rainy season for mercury. Mercury consists as the largest heavy metal threat to the health of the San Francisco Bay.

To monitor wet weather flows, the San Francisco Public Utilities Commission's Clean Water Program has monitoring stations that measures wet flow flows at four sites in the Bayview/Hunters' Point Station. The SLUG crew will also learn to work this data to pinpoint the locations for future rain barrels to reduce the risk of flooding in the Bayview/Hunters' Point Neighborhood.

Once the project has been established, the San Francisco League of Urban Gardeners with the San Francisco Public Utilities Commission will offer a public tour of the rain barrel and a series of three workshops to residents, commercial landscape gardeners and municipal parks' groundskeepers on how to create rain barrels and harvest rainwater at parks throughout the City. SLUG and SFPUC will also create a brochure on rainwater harvesting to be distributed to San Francisco residents.

Statement of Critical Water Issues

This project addresses the following critical issues:

- Improve Aquatic Habitats in the San Francisco Bay by reducing the introduction of a combination of wastewater and stormwater runoff into the Bay
- Provide good water quality for all beneficial uses and reduce the use of potable water onto urban landscaping
- Reduce flooding in an economically-depressed neighborhood

Currently, the Southeast Wastewater Treatment Plant (located in the Bayview/Hunters' Point Neighborhood) processes 80% of the wastewater produced by the City. San Francisco Public Utilities Commission has been working with the Bayview/Hunters' Point Community to reducing the impact (odors and flooding) of the wastewater treatment plant on this neighborhood.

Because the Southeast Wastewater Treatment Plant is located at the one of the lowest point of the City's east side, high wet flows can create a backup on the City's combined sewer system. This causes sewer backups into basements of nearby homes and businesses. Last year, Southeast experienced 12 combined storm/wastewater overflows in its three watershed collection basins. Since this neighborhood is the home of two power plants, recycling centers, and industrial facilities as well as two Superfund sites, residents are not only concerned about the presence of human waste in the flood water, but also the presence of heavy metals and other contaminants.

Nature/Scope/Objectives of the Project

The nature and scope of the project is to study the applicability of rainwater harvesting within an urban setting. The cities of Austin, TX and Vancouver, British Columbia have offered a rebate program for rainwater harvesting. But no California water agencies are offering rainwater harvesting programs at this time to their customers.

The selection of piloting this program in the Bayview/Hunters' Point neighborhood is due to the variety of reasons. Located at the southeast edge of San Francisco's waterfront, Hunters' Point was a former Naval Shipyard which was officially closed in 1971. One of the most economically stressed neighborhoods in the region, Bayview Hunters' Point has been home to heavy industry facilities and thus is one of most environmentally polluted areas in the Bay Region. Flooding from the City's combined storm/wastewater system has been one of this neighborhood's biggest complaints.

The San Francisco Public Utilities Commission has several properties in the community-the Southeast Wastewater Treatment Plant, its Southeast Community Facility, San Francisco Water Department's Corporation Yard, several pumping facilities and a recreational and daycare center. (See Table A-Selected Sites) Other City Departments also own properties in the area-including Recreation and Parks Department, Department of Public Works, San Francisco Library Department and the Department of Health. All of these locations will be used in the pilot program.

The teaming with San Francisco League of Urban Gardeners allows the SFPUC to work with a well-established nonprofit organization that has deep ties to the Bayview/Hunters' Point Community. SLUG is well-known for its community garden program where it works with residents to establish vegetable

and flower gardens throughout San Francisco, the third most urban city in the nation. Headquartered in Bayview, SLUG hires local youth to learn about gardening, construction and environmental monitoring for a wide range of environmental programs.

Objectives of this Proposal

The objectives of the project are the following:

- 1) Measure the potential of rain harvest containers to reduce flooding in the Bayview/Hunters' neighborhood
- 2) Measure the chemical parameters of the rainwater that would negatively impact the water quality of the San Francisco Bay
- 3) Reduce the use of potable water by using stored rainwater for landscape irrigation
- 4) Teach high school students from an economically-depressed neighborhood important water quality monitoring and computer skills

Methods, Procedures and Facilities

The proposed method and procedure of the program is as follows:

- 1) SFPUC and SLUG have identified ten city-owned locations for the placement of one hundred 60- to 75-gallon rain barrels. SFPUC has gotten agreement from the facility managers of these locations to place the rain barrels at their sites. (See Table A-List of Selected Sites)
- 2) Through site visits, SLUG has identified how rain can be captured at these ten sites. (See Table B-Schematics of Selected Sites)
- 3) SFPUC has identified four types of rain barrels that will be tested in this pilot program that have been used by the City of Austin, Texas and the City of Vancouver, BC for their rebate programs.
- 4) Once SFPUC has received notification that this proposal has been accepted, it will work in partnership with the San Francisco League of Urban Gardeners to train four high school interns from the Bayview/Hunters' Point neighborhood.
- 5) The workers will learn how to set up the rain barrels and will then place the hundred rain barrels at the ten selected sites. At each site, a rain gauge will also be installed by the workers.
- 6) The workers will be trained by the San Francisco Public Utilities Commission's Water Quality Division staff on how to monitor selected chemical parameters of the rainwater at each major wet weather incident. The chemical parameters will be pH, dissolved oxygen, nitrates, phosphates, temperature and turbidity. They will also be taught to enter this data on field monitoring data sheets (See Table C- Field Monitoring Data Sheet) and transfer this knowledge onto SFPUC's Water Monitoring Data of the San Francisco Bay.
- 7) The information will then be emailed to Water Quality Division of the San Francisco Public Utilities Commission as an assessment of the water quality of the City's stormwater runoff.

- 8) The workers will also be trained on monitoring wet weather flows from the SFPUC's wet weather stations.
- 9) The workers will also be trained by the Clean Water Fund on how stormwater runoff from San Francisco impacts the overall health of the San Francisco Bay.
- 10) The workers will then set up the 100 rain barrels at each of the ten sites.
- 11) They will monitor the quantity of water collected at each site on a weekly basis.
- 12) At each wet weather incident where measurable rain has fallen, they will test the collected rain within one working day of the rainfall for the following parameters- pH, dissolved oxygen, nitrates, phosphates, temperature, biochemical oxygen demand, and turbidity.
- 13) When the landscape areas next to the rain barrels required watering, the workers will use the collected rainwater to irrigate the surrounding landscape area.
- 14) Each time that they irrigate the landscape with the collected rainwater, they will note the quality of the landscape prior and after the application of the rainwater. (See Table D-Appearance of Landscape Areas Form)
- 15) After two months of operation, SLUG will then present a public tour of the rain barrels to promote the use of rainwater harvesting to the Bayview/Hunters' Point residents.
- 16) After four months of operation, SLUG will create a brochure with the San Francisco Public Utilities Commission about rain harvesting for the general public.
- 17) At the end of six months of operation, SLUG will provide at least three workshops to residents within Bayview Hunters' Point and two other nearby neighborhoods about rain harvesting.
- 18) At the end of eight months of operation, SLUG will provide to each of the facility managers at each of the ten rain harvesting sites an operations manual. The operations manual will explain how the rainharvesting containers operate; how to clean the rainharvesting containers; the normal amount of water that the container collect during an average wet weather incident, and any quantifiable measurements on the impact of the rainwater on the site's landscaping
- 19) At the end of ten months of operation, SLUG will provide an executive summary not less than five pages on
 - a) Type of containers that worked best in collecting rainwater
 - b) Insights on how to best place the rain barrels for maximum collection of water
 - c) Safety considerations with the handling and maintenance of the rainharvesting containers
 - d) Reaction to the public about rainharvesting containers
 - e) Long-term reaction of the facilities managers of the city-owned sites about the rainharvesting containers
 - f) Maintenance challenges that arose from the rainharvesting containers program
 - g) Suggestions for improvements in future rainharvest containers programs.

San Francisco Rainwater Collection Program Schedule, 2001-2002

Program Component/Deliverables	First Quarter July/ Aug/Sept.	Second Quarter Oct/Nov/Dec.	Third Quarter Jan/Feb/ March	Fourth Quarter April/May/ June
Equipment Acquisition Cost-\$31,100 (Rain Containers) Cost-\$15,596 (Test Kits/Equip) Cost-\$11,280 (Planning and Design Labor/Fringe)				
Crew Training/ Cost-\$400 (Training) Cost-\$2,755 (Interns' Labor/Fringe)				
Cistern installations Cost-\$22,042 (Interns' Labor/Fringe) Cost-\$5,640 (Travel Cost) Cost-\$3,000 (Equipment Rental) Cost-\$4,500 (Building Materials) Cost-\$2,200 (Tools)				
Monitoring and irrigation Cost-\$15,350 (Interns' Labor/Fringe) Cost-\$5,640 (Travel Cost) Cost-\$13,684 (Program Labor/Fringe)				
Data entry and analysis Cost-\$5117 (Interns' Labor/Fringe) Cost-\$13,684 (Program Labor/Fringe)				
Outreach material production Cost-\$2,800 (Printing and Advertising) Cost-\$2,200 (Miscellaneous)				
Outreach Cost-\$7546 (Program Labor/Fringe) Cost-\$13,683 (Program Labor/Fringe)				
Programmatic/annual reports				

C. Outreach, Community Involvement and Information Transfer

San Francisco Public Utilities Commission's co-partner in this proposal is the San Francisco League of Urban Gardeners. For over fifteen years, SLUG has created from its offices in the Bayview/Hunters' Point neighborhood, programs to improve quality of life through urban gardening by constructing and maintaining community gardens and urban landscapes; offering horticulture education in schools and neighborhoods, and conducting youth programs that foster confidence and independence. One of their programs is their Design and Construction Crew, which is staffed by young adults from low-income backgrounds, who create gardens at public housing developments, schools, senior and community centers, and demonstration sites.

Their largest demonstration garden was created nine years ago on San Francisco Public Utilities Commission land. Together, SFPUC and SLUG have created brochures, worksheets and seminars to educate the public about water efficient landscaping.

SLUG is known through the community for its high-quality public workshops such as the Community Composter Training Program and the Green Gardening Educator Training Program, which trains

residents from diverse communities to teach composting and gardening effectively. SLUG also conducts the Youth Garden Internship Program, the Transitional Employment Program, the Community Gardening Program, a Literacy Program, and Family Mentorship Program. Through all of these and more, SLUG would be able to bring the message of water conservation and rain water harvesting to tens of thousands of residents annually.

SLUG will act as the lead agency in outreaching to the public about this program. It plans to do the following:

- 1) Create a brochure about rainwater harvesting to the general public and distribute the brochure to the following locations:
 - a) Nurseries throughout San Francisco
 - b) SLUG's two large demonstration gardens in the City
 - c) Brochure racks at the City's 27 branch libraries
 - d) Brochure racks at the San Francisco Department of the Environment's offices
 - e) San Francisco City Hall
 - f) Lobby of the San Francisco Water Department
- 2) Create and hold a public tour of all of the ten sites to highlight various styles and the options in placement of the rain barrels
- 3) Create and perform three public workshops in the Bayview and nearby neighborhoods about rainwater harvesting
- 4) Create articles for the New Bayview Times, San Francisco Independent and the Sun Reporter (all published in the Bayview/Hunters' Point Community)
- 5) Present information on the rainwater harvesting project to Bayview-Hunters' Point neighborhood groups such as Southeast Alliance for Environmental Justice, All Hallows Senior Citizens Center and Southeast Facility Advisory Committee

Training will be provided to four high school students who are from the Bayview-Hunters' Point neighborhood. The workers will be part of SLUG's existing Design and Construction Crew which creates, maintains and renovates community and school gardens throughout the City. The four high school interns will learn the following:

1. Monitoring Water Quality Parameters of Stormwater Runoff
 - a) pH
 - b) dissolved oxygen
 - c) nitrates
 - d) phosphates
 - e) temperature
 - f) turbidity
2. Fundamentals of San Francisco Public Utilities Commissions' Wet Weather Monitoring Stations
3. Computer Skills
 - a) Excel
 - b) Word

- 4.
 - c) Email
 - Construction
 - a) Rain Barrels
 - b) Gutter Systems
 - c) Irrigation Systems

The information on the project will be created in an executive summary by SLUG and SFPUC and will be disseminated through the following methods:

- 1. Operating Manuals for the Facility Managers at Each of the Ten Sites
- 2. Final Report to the San Francisco Commission on the Environment
- 3. Final Report to the San Francisco Public Utilities Commission
- 4. Final Report to the Southeast Facility Advisory Council
- 5. Article in the San Francisco Independent (delivered to all homes in San Francisco on a biweekly basis)
- 6. Article in the Sun Reporter (the City's leading African-American newspaper)
- 7. Article in the New Bayview Times (the neighborhood newspaper)
- 8. Interview on KPOO (San Francisco public station that features jazz and other alternative music)

As the City's water agency, the San Francisco Public Utilities Commission also contacted the City's Planning Department about this proposal in a letter dated February 12, 2001. (See Attachment G-Letter to the Planning Commission)

D. Qualifications of the Applicants, Cooperators and Establishment of Partnerships

Kimberley M. Knox is the project manager for the San Francisco Public Utilities Commission. As requested, her resume is under Attachment E. Also included are the resumes of Carl Grimm, SLUG's Conservation Specialist, and David Lee Crosby, SLUG's Program Manager, the Director of Youth, Education and Job Training. (See Attachment E).

San Francisco League of Urban Gardeners will be the co-partner in this program. Founded in 1985, SLUG coordinates over 100 community gardens throughout San Francisco. Headquartered in the Bayview/Hunters' Point Neighborhood, SLUG also conducts programs with youth and the public which raise awareness of environmental issues in low-income and under-served communities. It provides training opportunities in composting and green gardening to the public in diverse communities and has also created an Environmental Justice Program to create a forum for community organizing and research pertaining to environmental justice issues.

SFPUC and SLUG have had a long and successful partnership. In 1991, SFPUC and SLUG created the Garden for the Environment, the City's largest demonstration garden. For the last seven years, SFPUC and SLUG have worked together to create two leading-edge brochures annually on topics ranging from soil amendments to drawing wildlife into your yard. SFPUC and SLUG also worked together on the City's first Environmental Summit for Youth and the City's Water Festival.

Other partners include Clean Water Action Fund which will give the workers an overview of the San Francisco Bay's ecosystem and how San Francisco's runoff impacts the health of the Bay as well as various city departments including San Francisco Recreation and Park Department; San Francisco Library Department and San Francisco Unified School District.

E. Costs and Benefits

1. Budget Summary and Breakdown

The total budget for this proposal is \$173,170.10.

See Attachment F for the detailed budget breakdown.

2. Budget Justification

The labor will be provided by four young interns who will be participating in SLUG's existing Design and Construction Program. The salary of these individuals is \$9 per hour with fringe benefits at 23%.

The costs of the monitoring equipment is based on using water quality kits created by the Global Rivers Environmental Education Network (GREEN), an internationally-renowned environmental education program. Over the last fifteen years, GREEN has worked with watershed monitoring groups throughout the world to create scientifically-accurate monitoring programs that lay people can use to measure the water quality of their storm water run-off.

The average cost of the rainharvesting containers ranges from \$150 to \$6,000. The estimated average lifespan of a rainharvesting container is 10 years. The containers will be purchased from manufacturers with proven track records from existing extensive programs in Texas and Vancouver, B.C., and then custom installed by the SLUG workers.

Materials expenses will cover tools, building materials, equipment rentals, printing and advertising. Tools needed will include shovels, rakes, levels, trowels, hammers, clipboards, power drill, power saw, safety vests, hardhats, hoses, sprinklers, work gloves, and rockbar. Building materials will include lumber, cinderblocks, fencing, plumbing fittings, pvc pipe, water filters, crushed rock, concrete, and asphalt impregnated board. Rentals will include a ditch digger, fork lift and tamper.

Programmatic expenses for SLUG program staff (please see Attachment F) will cover planning and site system design, coordination and ongoing training of the workers, coordination between site managers, SLUG and the PUC, production of training manuals and outreach brochures, and coordination of outreach efforts. A research assistant intern will contribute to and oversee the experimental design of the monitoring component. SLUG's IT Specialist will provide technical support for data management and analysis, and the Education and Outreach Coordinator will set up tours, coordinate brochure distribution and translate program findings into SLUG's myriad education and outreach projects.

The honorarium for the Clean Water Fund is for the training session that they will conduct with the four workers to give them an idea of how San Francisco's stormwater runoff impacts the health of the San Francisco Bay's ecosystem.

3. Benefit Summary and Breakdown

a. Quantify project outcomes and benefits

Our program is estimated to capture 200,850 gallons or rain water per year. This would be a total of 269 hundred cubic feet. The average lifespan of a container is estimated to be ten years. With San Francisco's current cost of \$1.26 per ccf for water and \$5.20 per ccf for sewer (beginning sewer rate), the total amount of funds saved for the 269 ccf each year with the 100 rainharvest containers would be \$1,738 per year and \$17,378 for the ten-year lifespan of the rainharvest containers.

The San Francisco Public Utilities Commission will be the beneficiary of these avoided costs. Traditionally, city departments funded by the general operating budget, do not pay for their water costs- but rather, it is absorbed by the San Francisco Water Department's rate payers. Irrigation accounts also do not pay sewer costs. Rather, the cost for treating wet weather flows is absorbed by the City's sewer customers at \$5.20 per ccf. So while SFPUC will be the first beneficiary of these avoided costs, the ratepayers of the SFPUC are the real beneficiary of these avoided costs.

b. List of nonquantifiable project outcomes

- Reduction of toxics and contaminants flowing into the Bay from combined stormwater/ sewer flows in wet weather
- Evaluation of the potential of rainharvesting on flooding within an economically-depressed neighborhood
- Testing possible contaminants in stormwater runoff to assess the impact of the runoff on the ecosystem of the Bay
- Visibility of an important tool that can be used in almost every home and business that has a landscape area
- Training in environmental and computer skills of four high school interns from an economically-depressed neighborhood
- Heighten the ecological awareness and the importance of the San Francisco Bay to a neighborhood that has been impacted by industries, two Superfund sites and other environmental impacts.
- Improving skills, abilities and tools of a local nonprofit organization in the Bayview to address some of the environmental concerns of an economically distressed community
- Reduce the mismatch between Bay-Delta water supplies by reducing the use of potable water on irrigating landscaping

CALFED will benefit from the reduction of toxic and contaminants into the San Francisco Bay as well as important scientific data on the quality of rainwater being collected in highly urban and polluted neighborhoods in the Bay Area. The community as a whole benefits when young individuals are given skills that they can use to improve themselves and those around them.

4. Assessment of Costs and Benefits

The capacity of the 100 rainharvesting containers listed in our proposal is 24,500 gallons. It is anticipated that the container that would store 10,350 gallons of rainwater would be filled and emptied three times during the wet season for a total of 31,050 saved gallons per year. The remaining ninety-nine containers hold 14,150 gallons. It is estimated that these containers will be filled and subsequently emptied at each of the twelve wet-weather flow incidents in an average year. This would capture 169,800 gallons in an average year. This means that the total amount of water stored per year would be 200,850 (31,050 for the large 10,350 gallon container and 169,800 gallons for the remaining 99 other containers). This would be a total of 269 hundred cubic feet. The average lifespan of a container is estimated to be ten years.

With San Francisco's current cost of \$1.26 per ccf for water and \$5.20 per ccf for sewer (beginning sewer rate), the total amount of funds saved for the 269 ccf each year with the 100 rainharvest containers would be \$1,738 per year and \$17,378 for the ten-year lifespan of the rainharvest containers.

Clearly, the economics of the saved water does not make this project viable in terms of simple monetary gains. But its potential impact on reducing toxics into the Bay, reducing flooding of homes and businesses in a economically-distressed neighborhood and the potential for outreaching to residents about their impact on the Bay's ecosystem is an unquantifiable, but immeasurably large benefit. The other factor of this proposal is that the results could be applied to areas within California that have large spans of landscaping that are currently using potable water for irrigation.

This is why we are proposing this project as a pilot program under CALFED's Water Use Efficiency Grant Program.

Project Beneficiary	Costs	Benefit
CALFED	\$159,314.40	<ul style="list-style-type: none"> -Data on How Rainharvesting Could Reduce Water Use in California -Data on Water Quality Parameters of Stormwater Runoff -Data on the Potential Impacts of Rainharvesting to Reduce Combined Storm/Sewer Overflows in Extreme Wet Weather Incidents
Environment	Covering Limited Amount of Landscaping areas with the Rainharvesting containers, Slightly Reducing Land Mass Available for Water Absorption	<ul style="list-style-type: none"> -Reduction of Combined Storm/Sewer Overflows into Bay -A Low-Impact Tool to Irrigate Outlying Landscaped Areas -Data on the Benefit of Using Rainwater (Versus Potable Water) to Irrigate Certain Landscape Plants
SFPUC	<ul style="list-style-type: none"> -Time of Program Manager and Commitment of Water Quality Staff to Help Train High School Interns -Time of Program Manager to Help Promote the Project to Residents and Other City Departments 	<ul style="list-style-type: none"> -Data on how Rainharvesting can Reduce Potential for Overflows -Reduction of Use of Potable Water on Landscaping -Data on the Water Quality Parameters of Rainwater Collected through Harvesting Systems -100 Rainwater Containers -Services of High School Interns to Irrigate Public Landscape Areas for Nine Months -Brochure for Customers on Rainwater Harvesting -Operations Manual that Can Be Shared with Other Departments on the Procedures of Irrigating with Rainharvesting Containers

Residents	<ul style="list-style-type: none"> -Cost of Program Manager and SFPUC's Promotion absorbed by their rates 	<ul style="list-style-type: none"> -Reduction of potable water use by City Departments -Irrigation System for Public Landscapes -Information of how they can harvest rainwater for their own landscapes -Data on how rainwater harvesting could reduce the City's combined storm/sewer system overflows
SLUG	<ul style="list-style-type: none"> -Use of demonstration garden and staffing to highlight rainwater harvesting to residents -Use of existing networking system to promote a new program -Printing of SLUG Newsletters highlighting rainharvesting information -Use of SLUG's Computers for Data Entry and Monitoring 	<ul style="list-style-type: none"> -Hire four high school interns to learn how to install and monitor rainharvesting -Develop skills and abilities of community residents -Expand SLUG's outreach and education efforts -Expand SLUG's visibility within the community and with City Departments -Expand SLUG's ability to irrigate community gardens and street trees in a cost-effective manner
Recreation and Parks Dept. and City College	<ul style="list-style-type: none"> -Time of facility manager to work with SLUG to locate a sites for the rainharvesting containers -Use of land where the rainwater harvesting container will be located 	<ul style="list-style-type: none"> -Highlight the Department's goal of using natural resources wisely to the community at large -Promote their commitment to best serving the City's environment through use of this new tool -Increase the visibility of these centers to the community through outreach efforts

Attachment A

Sites for Placement of Rain Barrels

Southeast Wastewater Treatment Plant, 750 Phelps

Southeast City College Campus, 1600 Oakdale

Phelps Nursery, 710 Phelps

San Francisco League of Urban Gardeners, 2088 Oakdale

Milton Meyers Recreation Center, 195 Kiska

Joe Lee Recreation Center, Newcomb and Third

Department of Public Works' Corporate Yard, 2323 Cesar Chavez

SF Water Department's Corporate Yard, 1990 Newcomb

Bayview Opera House, 4705 3rd St.

City College's Auto Welding Center, 1400 Evans

Attachment B-Schematics of Selected Sites

Attachment C
Field Monitor Data Sheet

Date: _____ Air Temperature: _____

Site: _____ Barrel: _____

Data Collector: _____

Parameter	Measurement
pH	
Dissolved Oxygen	
Nitrates	
Phosphates	
Turbidity	
Temperature	

Attachment D

Landscape Appearance Sheet

Date: _____

Data Collector: _____

Site: _____

Barrel: _____

Appearance	Measurement
Color of Turf*	
Color of Shrubs/Trees*	
Appearance of Any Bald or Dead Spots of Turf	
# of Dead Spots of Turf	
Size of Largest Dead Turf Spot	
Ball Test	
Any Flooding on Landscape	

*Color Test-Green (Being 5) to Brown (Being 1)

February 14, 2001

Gerald Green, Director
Department of Planning
1660 Mission Street, 5th Floor
San Francisco, CA 94103

Dear Mr. Green:

The San Francisco Public Utilities Commission in partnership with the San Francisco League of Urban Gardeners, is submitting a proposal for a grant to create a pilot program to measure the impact of rainharvesting on the City's combined storm/sewer system.

The proposal would place 100 rainharvesting containers at ten locations throughout San Francisco. These location are as follows:

San Francisco Wastewater Treatment Facility
S.F. City College Southeast campus
Phelps Nursery on 750 Phelps
Saint Mary's Urban Youth Farm
SLUG office at 2000 Oakdale to be used as a station for street tree watering system
Milton Meyers Recreation Center
Joe Lee Recreation Center
S.F. Department of Public Works Corporate Yard
S.F. Water Department Corporate Yard
Bayview Opera House
City College Auto Welding Center

All of these locations are owned by the City of San Francisco. In the event that a location does not work out, we plan to substitute the location with a City-owned property in the Bayview/Hunters' Point neighborhood.

The rainharvesting containers will be installed and monitored by high school interns employed by the San Francisco League of Urban Gardeners. The water will be used to water the facility's landscaping. The students will also work with SFPUC in measuring the potential impact of the rainwater containers on future combined storm/sewer system overflows during severe wet weather incidents.

If you or your staff have any questions, please give me a call at (415) 554-2425.

Sincerely,

Kimberley M. Knox
Conservation Administrator